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10/575,300	09/18/2006	Matthias Ebert	MST-2390.1	3699

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EXAMINER	
AEDER, SEAN E	

ART UNIT	PAPER NUMBER
1642	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/575,300	EBERT ET AL.	
	Examiner	Art Unit	
	Sean E. Aeder, Ph.D.	1642	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 April 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12,14,16 and 18-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12,14,16 and 18-24* is/are rejected.

7)☒ Claim(s) *2 and 24* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9/1/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Detailed Action

The Election filed 4/5/07 in response to the Office Action of 3/6/07 is acknowledged and has been entered. Applicant elected group I with traverse.

The traversal is on the ground(s) that Applicant argues groups I and II should be searched together since a special technical feature of the instant claimed methods defines a contribution over the prior art. This is not found persuasive. A national stage application shall relate to one invention only or to a group of inventions so linked as to form a single general inventive concept. When claims to different categories are present in the application, the claims will be considered to have unity of invention if the claims are drawn only to one of the following combinations of categories: (1) A product and a process specially adapted for the manufacture of said product; or (2) A product and a process of use of said product; or (3) A product, a process specially adapted for the manufacture of the said product, and a use of the said product; or (4) A process and an apparatus or means specifically designed for carrying out the said process; or (5) A product, a process specially adapted for the manufacture of the said product, and an apparatus or means specifically designed for carrying out the said process. The allowed combinations do not include multiple methods, as claimed in the instant application. If multiple products, processes of manufacture or uses are claimed, the first invention of the category first mentioned in the claims of the application is considered as the main invention in the claims, see PCT article 17(3) (a) and 1.476 (c), 37 C.F.R. 1.475(b) and (d). Group I is the main invention. After that, all other products and methods are broken out as separate groups (see 37 CFR 1.475(d).). It is noted the

methods of group I differ from the methods of group II at least in method steps and reagents used, response variables, and/or criteria for success. For these reasons, the groups set-forth in the restriction requirement of 3/6/07 are deemed to be proper and the restriction is therefore made FINAL.

Claims 1-12, 14, 16, and 18-24 are pending and currently under consideration.

Claim Objections

Claim 2 is objected to for failing to further limit the claim from which it depends. Claim 2 appears to recite a result rather than a limitation to the claim from which it depends. Proper correction is required.

Claim 24 is objected to for reciting: "...(b) detecting in said invasion front sample whether MN/CA9 gene expression product is absent or at a significantly reduced level from the level that said MN/CA9 gene expression product is normally expressed...". One of skill in the art would understand that step (b) is a "determining" and not a "detecting" step. It is suspected Applicant intended claim 24 to recite: "...(b) **determining** ~~**detecting in said invasion front sample**~~ whether MN/CA9 gene expression product is absent or at a significantly reduced level **in said invasion front sample** ~~**from**~~ **as compared to** the level that said MN/CA9 gene expression product is normally expressed...". Proper correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 21 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd.* v. *Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-12, 14, 16, and 18-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 and dependent claims 2-12, 14, 16, and 18-23 are rejected because claim 1 recites: "...determining that said subject vertebrate has a poorer prognosis if the level of....". It is unclear *to what* said prognosis is "poorer".

Claim 8 is rejected as indefinite for reciting: "weak staining", "moderate staining", and "strong staining". It is not clear from the claim or the specification what is meant by "weak", "moderate", or "strong" staining. This renders the claim indefinite because the

terms "weak", "moderate", and "strong" staining are not defined by the claim, the specification does not provide a standard for ascertaining the requisite degrees, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Given the above reasons, the metes and bounds of the claim cannot be determined.

Claim 8 is rejected for reciting: "...wherein if the immunoreactivity score of the sample determined in steps b(1) to b(3) is above the average immunoreactivity score of said comparable samples...". Because the method recites multiple immunoreactivity scores of different samples ("subject vertebrate sample" and "comparable samples") determined in steps b(1) to b(3), it unclear what is meant by "the immunoreactivity score of *the sample* determined in steps b(1) to b(3)". It is suspected Applicant *may* intend claim 8 to recite: "...wherein if the immunoreactivity score of the **subject vertebrate** sample determined in steps b(1) to b(3) is above the average immunoreactivity score of said comparable samples...".

Claim 21 provides for the use of the method of claim 1, wherein said prognostic method is used as an aid in the selection of treatment for said preneoplastic/neoplastic disease afflicting said vertebrate, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 24 is rejected for reciting: "...said tissue loses or expresses MN/CA IX at a significantly reduced level upon carcinogenesis...". It is unclear *to what* level loss of MN/CA IX is reduced. Further, it is unclear to what level MN/CA IX is significantly reduced. It is suspected Applicant may intend claim 24 to recite: "...said tissue loses **MN/CA IX expression** or ~~**expresses**~~ **expression of** MN/CA IX ~~**at a**~~ **is** significantly reduced ~~**level**~~ upon carcinogenesis...".

Claim 24 is rejected for reciting: "...a tissue sample from the invasion front of said preneoplastic/neoplastic disease...the level that said MN/CA9 gene expression product is normally expressed in said tissue, when said tissue is unaffected by said disease...". It is unclear how a tissue sample from the invasion front of a preneoplastic/neoplastic disease can comprise a tissue unaffected by a preneoplastic/neoplastic disease.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-12, 14, 16, 18-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In the instant case, the claims are

inclusive of: **(1)** a genus of samples comprising preneoplastic/neoplastic tissue taken from a subject vertebrate with a disease that affects a tissue which normally expresses MN/CA IX protein, but loses or has significantly reduced MN/CA IX expression upon carcinogenesis (see claim 1); **(2)** a genus of MN/CA IX protein *variants* that are encoded by nucleotide sequences that hybridize under stringent hybridization conditions of 50% formamide at 42 degrees C to any complement of SEQ ID NO:1's coding region and degenerate sequences thereof (see claim 1); and **(3)** a genus of tissue samples from the invasion front of preneoplastic/neoplastic disease afflicting a subject vertebrate, wherein said disease affects a tissue in which 40% or more of the cells normally express MN/CA IX protein, but said tissue loses MN/CA IX expression or expression of MN/CA IX is significantly reduced upon carcinogenesis (see claim 24). However, the written description in this case only sets forth gastric cancer tissue samples as samples comprising neoplastic tissue taken from a subject vertebrate with a disease (gastric cancer) that affects a tissue which normally expresses MN/CA IX protein, but loses or has significantly reduced MN/CA IX expression upon carcinogenesis (see Example 2, in particular). The specification does not disclose any other samples comprising preneoplastic/neoplastic tissue taken from a subject vertebrate with a disease that affects a tissue which normally expresses MN/CA IX protein, but loses or has significantly reduced MN/CA IX expression upon carcinogenesis. Further, the written description only sets forth MN/CA IX proteins encoded by the polynucleotide sequence set-forth as SEQ ID NO:1 and polynucleotide sequences that only differ from SEQ ID NO:1 due to degeneracy of the genetic code.

The specification does not disclose any other MN/CA IX protein as broadly encompassed by the claims. Further, the written description in this case only sets forth tissue samples from gastric cancers as tissue samples from the invasion front of preneoplastic/neoplastic disease afflicting a subject vertebrate, wherein said disease affects a tissue in which 40% or more of the cells normally express MN/CA IX protein, but said tissue loses MN/CA IX expression or expression of MN/CA IX is significantly reduced upon carcinogenesis (see Examples 2 and 3, in particular).

The state of the prior art is such that MN/CA IX expression has been shown to be elevated in a few cancers and reduced in others (such as gastric cancers) (see Bui et al: Clinical Cancer Research, 2/03, 9:802-811). However, the state of the art is such that it is unclear which cancers, other than gastric cancers, result in a decrease in MN/CA IX expression upon carcinogenesis.

A description of a genus may be achieved by means of a recitation of a representative number of species falling within the scope of the genus or by describing structural features common to that genus that "constitute a substantial portion of the genus." See University of California v. Eli Lilly and Co., 119 F.3d 1559, 1568, 43 USPQ2d 1398, 1406 (Fed. Cir. 1997): "A description of a genus of cDNAs may be achieved by means of a recitation of a representative number of cDNA, defined by nucleotide sequence, falling within the scope of the genus or of a recitation of structural features common to the members of the genus, which features constitute a substantial portion of the genus."

The court has since clarified that this standard applies to compounds other than cDNAs. See University of Rochester v. G.D. Searle & Co., Inc., F.3d, 2004 WL 260813, at *9 (Fed.Cir.Feb. 13, 2004). The instant specification fails to provide sufficient descriptive information, such as definitive structural or functional features that are common to the genera. That is, the specification provides neither a representative number of samples, SEQ ID NOs, or tissue samples that encompass the genera nor does it provide a description of structural features that are common to the genera. Since the disclosure fails to describe common attributes or characteristics that identify members of the genera, and because expression levels of MN/CA IX are highly variant, the disclosure of gastric cancer tissue samples, SEQ ID NO:1, and samples from the invasion front of gastric cancers are insufficient to describe the genera. Thus, one of skill in the art would reasonably conclude that the disclosure fails to provide a representative number of species to describe and enable the genera as broadly claimed.

Vas-Cath Inc. v. Mahurkar, 19USPQ2d 1111, clearly states "applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession *of the invention*. The invention is, for purposes of the 'written description' inquiry, *whatever is now claimed.*" (See page 1117.) The specification does not "clearly allow persons of ordinary skill in the art to recognize that [he or she] invented what is claimed." (See *Vas-Cath* at page 1116). As discussed above, the skilled artisan cannot envision the detailed chemical structure of the encompassed genera, and therefore conception is not achieved until reduction to

practice has occurred, regardless of the complexity or simplicity of the method of isolation. Adequate written description requires more than a mere statement that it is part of the invention and reference to a potential method of isolation. The compound itself is required. See *Fiers v. Revel*, 25 USPQ2d 1601 at 1606 (CAFC 1993) and *Amgen Inc. v. Chugai Pharmaceutical Co. Ltd.*, 18 USPQ2d 1016.

One cannot describe what one has not conceived. See *Fiddes v. Baird*, 30 USPQ2d 1481 at 1483. In *Fiddes*, claims directed to mammalian FGF's were found to be unpatentable due to lack of written description for that broad class. The specification provided only the bovine sequence. Applicant is reminded that *Vas-Cath* makes clear that the written description provision of 35 U.S.C. §112 is severable from its enablement provision (see page 1115).

Claims 1-12, 14, 16, and 18-24 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a method which is prognostic for a patient with gastric cancer comprising (a) detecting MN/CA 9 polypeptide in a sample comprising tissue from the invasion front of said gastric cancer, (b) quantitating the level of said MN/CA 9 polypeptide in said sample, (c) comparing the level of MN/CA 9 polypeptide of step (b) to the average level of MN/CA 9 polypeptide in analogous invasion front samples from subjects with gastric cancer, (d) determining that said patient has a prognosis of shorter survival than the average subject with gastric cancer if the level of MN/CA 9 polypeptide level of step (b) is higher than the average level of MN/CA 9 polypeptide in analogous invasion front samples from subjects with gastric

cancer, wherein MN/CA 9 polypeptide is encoded by SEQ ID NO:1 or sequences that differ from SEQ ID NO:1 solely due to the degeneracy of the genetic code, does not reasonably provide enablement for a method which is prognostic for every preneoplastic/neoplastic disease afflicting a subject vertebrate, wherein said disease affects a tissue, which tissue normally expresses MN/CA IX protein, but loses or has significantly reduced MN/CA IX expression upon carcinogenesis, comprising (a) detecting MN/CA9 polypeptide in just any sample comprising preneoplastic/neoplastic tissue taken from said vertebrate, (b) quantitating the level of said MN/CA9 polypeptide in said sample, (c) comparing the level of MN/CA9 polypeptide of step (b) to the average level of MN/CA9 polypeptide in just any "comparable" samples taken from vertebrates afflicted by the same preneoplastic/neoplastic disease as the subject vertebrate, and (d) determining that said subject vertebrate has every type of poorer prognosis if the level of MN/CA9 polypeptide of step (b) is higher than the average level of MN/CA9 polypeptide in said comparable samples, wherein MN/CA IX protein is encoded by just any nucleotide sequences that hybridize under stringent hybridization conditions of 50% formamide at 42 degrees C to any complement of SEQ ID NO:1's coding region or degenerate sequences thereof. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to practice the invention commensurate in scope with these claims.

Factors to be considered in determining whether undue experimentation is required are summarized in *Ex parte* Forman, 230 USPQ 546 (BPAI 1986). They include the nature of the invention, the state of the prior art, the relative skill of those in

the art, the amount of direction or guidance disclosed in the specification, the presence or absence of working examples, the predictability or unpredictability of the art, the breadth of the claims, and the quantity of experimentation which would be required in order to practice the invention as claimed.

The instant claims are drawn to a method which is prognostic for every preneoplastic/neoplastic disease afflicting a subject vertebrate, wherein said disease affects a tissue, which tissue normally expresses MN/CA IX protein, but loses or has significantly reduced MN/CA IX expression upon carcinogenesis, comprising (a) detecting MN/CA9 polypeptide in just any sample comprising preneoplastic/neoplastic tissue taken from said vertebrate, (b) quantitating the level of said MN/CA9 polypeptide in said sample, (c) comparing the level of MN/CA9 polypeptide of step (b) to the average level of MN/CA9 polypeptide in just any "comparable" samples taken from vertebrates afflicted by the same preneoplastic/neoplastic disease as the subject vertebrate, and (d) determining that said subject vertebrate has every type of poorer prognosis if the level of MN/CA9 polypeptide of step (b) is higher than the average level of MN/CA9 polypeptide in said comparable samples, wherein MN/CA IX protein is encoded by just any nucleotide sequences that hybridize under stringent hybridization conditions of 50% formamide at 42 degrees C to any complement of SEQ ID NO:1's coding region or degenerate sequences thereof. (see claim 1). The instant claims are further drawn to a method which is prognostic for just every preneoplastic/neoplastic disease afflicting a subject vertebrate, wherein said disease affects a tissue in which 40% or more of the cells normally express MN/CA IX protein, but said tissue loses or

expresses MN/CA IX polypeptide at a significantly reduced level upon carcinogenesis, said method comprising: (a) taking a tissue sample from the invasion front of said preneoplastic/neoplastic disease, (b) detecting in said invasion front sample whether MN/CA9 polypeptide is absent or at a significantly reduced level from the level that said MN/CA9 polypeptide is normally expressed in said tissue, when said tissue is unaffected by said disease, and (c) concluding that if said MN/CA9 polypeptide expression is neither absent nor at such a significantly reduced level in said invasion front sample that the subject vertebrate has a poorer prognosis than if said MN/CA9 polypeptide were absent or at such a significantly reduced level in said invasion front sample (claim 24).

The specification teaches a method which is prognostic for a patient with gastric cancer comprising (a) detecting MN/CA 9 polypeptide in a sample comprising tissue from the invasion front of said gastric cancer, (b) quantitating the level of said MN/CA 9 polypeptide in said sample, (c) comparing the level of MN/CA 9 polypeptide of step (b) to the average level of MN/CA 9 polypeptide in analogous invasion front samples from subjects with gastric cancer, (d) determining that said patient has a prognosis of shorter survival than the average subject with gastric cancer if the level of MN/CA 9 polypeptide level of step (b) is higher than the average level of MN/CA 9 polypeptide in analogous invasion front samples from subjects with gastric cancer, wherein MN/CA 9 polypeptide is encoded by SEQ ID NO:1 or sequences that differ from SEQ ID NO:1 solely due to the degeneracy of the genetic code (see Example 2, Example 3, and Figure 5, in particular).

The level of unpredictability for providing any type of prognosis for any type of disease is quite high. The state of the prior art dictates that if a molecule such as MN/CA 9 polypeptide is to be used as a surrogate for a diseased state, some disease state must be identified in some way with the molecule. There must be some expression pattern in a particular tissue that would allow MN/CA 9 polypeptide to be used in a diagnostic or prognostic manner. For example, Tockman et al (Cancer Res., 1992, 52:2711s-2718s) teach considerations necessary in bringing a cancer biomarker (intermediate end point marker) to successful application. Tockman et al teaches that prior to the successful application of newly described markers, research must validate the markers against acknowledged disease end points, establish quantitative criteria for marker presence/absence and confirm marker predictive value in prospective population trials (see abstract). Early stage markers of carcinogenesis have clear biological plausibility as markers of preclinical cancer and if validated (emphasis added) can be used for population screening (p. 2713s, col 1). The reference further teaches that once selected, the sensitivity and specificity of the biomarker must be validated to a known (histology/cytology-confirmed) cancer outcome. The essential element of the validation of an early detection marker is the ability to test the marker on clinical material obtained from subjects monitored in advance of clinical cancer and *link* those marker results with subsequent histological confirmation of disease. This irrefutable link between antecedent marker and subsequent acknowledged disease is the essence of a valid intermediate end point marker (p. 2714, see Biomarker Validation against Acknowledged Disease End Points). Clearly, prior to the successful application of newly

described markers, markers must be validated against acknowledged disease end points and the marker predictive value must be confirmed in prospective population trials (p. 2716s, col 2). Therefore, absent evidence of the polypeptide's expression in a particular tissue including the correlation to a diseased state, one of skill in the art would not be able to predictably use the polypeptide in any diagnostic or prognostic setting without undue experimentation.

Since neither the specification nor the prior art provide evidence of a universal association between the claimed method and (1) every type of preneoplastic/neoplastic disease afflicting a subject vertebrate, wherein said disease affects a tissue, which tissue normally expresses MN/CA IX protein, but loses or has significantly reduced MN/CA IX expression upon carcinogenesis, (2) every type of MN/CA IX protein, (3) every type of sample, and (4) every type of prognosis, a practitioner wishing to practice the claimed invention would be required to provide extensive experimentation to demonstrate such an association. Such experimentation would in itself be inventive.

Further, as noted in the written description rejection above, it is unclear which preneoplastic/neoplastic diseases affect a tissue which tissue normally expresses MN/CA IX protein, but loses or has significantly reduced MN/CA IX expression upon carcinogenesis. Determining which preneoplastic/neoplastic diseases affect a tissue which tissue normally expresses MN/CA IX protein, but loses or has significantly reduced MN/CA IX expression upon carcinogenesis would require undue experimentation.

One cannot extrapolate the teachings of the specification to the scope of the claims because the claims are broadly drawn to a method which is prognostic for every preneoplastic/neoplastic disease afflicting a subject vertebrate, wherein said disease affects a tissue, which tissue normally expresses MN/CA IX protein, but loses or has significantly reduced MN/CA IX expression upon carcinogenesis, comprising (a) detecting MN/CA9 polypeptide in just any sample comprising preneoplastic/neoplastic tissue taken from said vertebrate, (b) quantitating the level of said MN/CA9 polypeptide in said sample, (c) comparing the level of MN/CA9 polypeptide of step (b) to the average level of MN/CA9 polypeptide in just any "comparable" samples taken from vertebrates afflicted by the same preneoplastic/neoplastic disease as the subject vertebrate, and (d) determining that said subject vertebrate has every type of poorer prognosis if the level of MN/CA9 polypeptide of step (b) is higher than the average level of MN/CA9 polypeptide in said comparable samples, wherein MN/CA IX protein is encoded by just any nucleotide sequences that hybridize under stringent hybridization conditions of 50% formamide at 42 degrees C to any complement of SEQ ID NO:1's coding region or degenerate sequences thereof, and Applicant has not enabled said method because it has not been shown that detecting MN/CA9 polypeptide in just any sample comprising preneoplastic/neoplastic tissue taken from just any vertebrate with just any preneoplastic/neoplastic disease, wherein said disease affects a tissue, which tissue normally expresses MN/CA IX protein, but loses or has significantly reduced MN/CA IX expression upon carcinogenesis, quantitating the level of said MN/CA9 polypeptide in said sample, comparing said level to the average level of MN/CA9

polypeptide in just any "comparable" samples taken from vertebrates afflicted by the same preneoplastic/neoplastic disease as the subject vertebrate, wherein said subject vertebrate has every type of poorer prognosis if the level of MN/CA9 polypeptide in the sample from said subject is higher than the average level of MN/CA9 polypeptide in said comparable samples, wherein MN/CA IX protein is encoded by just any nucleotide sequences that hybridize under stringent hybridization conditions of 50% formamide at 42 degrees C to any complement of SEQ ID NO:1's.

In view of the teachings above and the lack of guidance, workable examples and or exemplification in the specification, it would require undue experimentation by one of skill in the art to determine with any predictability, that the method would function as claimed.

Summary

No claim is allowed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean E. Aeder, Ph.D. whose telephone number is 571-272-8787. The examiner can normally be reached on M-F: 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shanon Foley can be reached on 571-272-0898. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SEA

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